Remarks

Claims 23-25, 27, 28, and 30-33 are pending in this application. Applicants have amended claim 23 to clarify the claimed invention. Applicants respectfully request favorable reconsideration of this application.

The Examiner rejected claims 23-25, 30 and 31 under 35 U.S.C. § 102(e) as being anticipated by U.S. patent publication 2007/0176773 to Smolander et al. The Examiner rejected claims 27 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Smolander et al. in view of U.S. patent 6,204,764 to Maloney.

Smolander et al. does not disclose the invention recited in claim 23 since, among other things, Smolander et al. does not disclose a sensor that is capacitively or inductively coupled with an LC resonator without forming a direct galvanic contact. The invention recited in claim 23 includes a non-galvanic, non-conductive coupling between the LC resonator and the sensor, which Smolander et al. does not disclose. It is important to understand that the coupling according to the invention recited in claim 23 takes place within the sensor and not between the sensor and a separate reader. On the other hand, Smolander et al. appears to disclose a sensor arrangement that is remotely readable by a separate reader. Smolander et al. does not disclose a non-galvanic, non-conductive coupling between an LC resonator and a sensor that are both part of a sensor arrangement as recited in claim 23. The sensor arrangement according to the invention recited in claim 23 is probed with a separate reader in non-galvanic, non-conductive manner.

On the other hand, opposite to the claimed invention, Smolander et al. discloses a galvanic connection to be used on the sensor arrangement that is to be remotely probed. The Examiner asserts that Smolander et al. suggests a non-galvanic connection, referring to Fig. 3 of Smolander et al. and to the antenna coil 5 of the reader device 24 that forms a portion of the resonant LC circuit 21. However, both the sensor and reader disclosed by Smolander et al. includes a coil. The non-galvanic connection is established between the reader and the sensor. It appears as if the Examiner is mistakenly substituted events that occur in the sensor itself with events that occur when the sensor is read by a separate reader.

As described in paragraph [0036], Smolander et al. discloses, "[I]n FIG. 2, a practicable embodiment of sensor 22 according to the invention comprises a planar coil 13 fabricated on a polymer laminate, two capacitors 14 having their planar electrodes placed on both sides of the laminate and a sensor resistor 12. The sensor resistor 12 is connected over the planar electrodes of capacitors 14 by bonding or gluing with a conductive adhesive. The parallel resistor 23 of FIG. 1 is omitted from the embodiment of FIG. 2" (emphasis added). Additionally, in paragraph [0038] Smolander et al. states, "Referring to FIG. 3, the following text describes the function of the sensor and the reader device 24 thereof. Coil 13 of sensor 22 is magnetically coupled by the mutual inductance (M) to the antenna coil 5 of reader device 24 that forms a portion of the resonant LC circuit 21. RF current to resonant circuit 21 is fed from a voltage-controlled oscillator 1 via directional coupler 2 and coupling capacitor 3" (emphasis added).

In other words, Smolander et al. discloses a sensor arrangement 22 that includes a sensor

resistor 12 that is galvanically (in a conductive matter) connected to the sensor and is capable of altering the resonant frequency of the sensor 22. The sensor 22 can be read remotely by a separate reader device magnetically coupling to the sensor 22. Therefore, Smolander et al. discloses three essential components: the sensor 22, the sensor element (resistor) 12, and the reader 24. According to Smolander et al. the sensor element 12 is coupled to the sensor 22 galvanically (in conductive manner). The sensor element 12 and other parts of the sensor 22 together form a resonator circuit that can be probed with the separate reader. Thus, Smolander et al. discloses a conductive coupling within the sensor 22 to form a resonance circuit and then this resonance circuit is remotely probed by a separate reader.

On the other hand, contrary to the teachings of Smolander et al., the claimed invention includes an LC resonator that includes a capacitor and a coil and a sensor element that are coupled capacitively inductively in a non-galvanic manner to form a resonator circuit within the sensor arrangement. According to the claimed invention, the resonator circuit can be read remotely by a reader in a manner similar to Smolander et al. Thus, the claimed invention includes a non-conductive capacitive or inductive coupling within the sensor arrangement to form a resonance circuit. This resonance circuit can be remotely probed by a separate reader.

A difference between Smolander et al. and claimed invention is how the sensor element is coupled to form a resonator circuit. The resonator circuit is then probed in both cases remotely by a separate reader using the well-known RFID type reading principles. However, the sensor arrangement according to the claimed invention does not include a reader device. Nevertheless, the sensor arrangement can be remotely probed by a separate reader.

When comparing the structures and operating principles of the structure according to Smolander et al. and the claimed invention, there is clear difference in setting up the resonator circuit to be remotely probed. The non-galvanic, non-conductive principle based on capacitive or inductive coupling plays a significant role in providing the advantages achieved by the claimed invention.

In view of the above, Smolander et al. does not disclose all elements of the invention recited in claims 23-25, 30 and 31. Since Smolander et al. does not disclose all elements of the invention recited in claims 23-25, 30 and 31, the invention recited in claims 23-25, 30 and 31, is not properly rejected under 35 U.S.C. § 102(b). For an anticipation rejection under 35 U.S.C. § 102(b) no difference may exist between the claimed invention and the reference disclosure. *See Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q. 841 (C.A.F.C. 1984).

Along these lines, anticipation requires the disclosure, in a cited reference, of each and every recitation, as set forth in the claims. *See Hodosh v. Block Drug Co.*, 229 U.S.P.Q. 182 (Fed. Cir. 1986); *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985); *Orthokinetics, Inc. v. Safety Travel Chairs*, Inc., 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986); and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 U.S.P.Q.2d 1081 (Fed. Cir. 1986).

The combination of Smolander et al. and Maloney does not suggest the invention recited in claims 27 and 28 since, among other things, the combination does not suggest a sensor arrangement that is remotely readable by a separate reader utilizing radio frequencies for determining desired quantities from sources. Additionally, the combination does not suggest a

sensor that is capacitively or inductively coupled with an LC resonator without forming a direct galvanic contact. This is discussed with respect to Smolander et al. above. Maloney suggests capacitive coupling among plates of an antenna to convey radio transmissions. The combination of Smolander et al. and Maloney does not suggest capacitive coupling between a coil and a sensor element forming an indicator. Therefore, the combination of Smolander et al. and Maloney does not suggest the invention recited in claims 27 and 28.

In view of the above, the references relied upon in the office action do not disclose or suggest patentable features of the claimed invention. Therefore, the references relied upon in the office action do not anticipate the claimed invention and do not make the claimed invention obvious. Accordingly, Applicants submit that the claimed invention is patentable over the cited references and respectfully request withdrawal of the rejections based on the cited references.

If an interview would advance the prosecution of this application, Applicants respectfully urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

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